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ABSTRACT

A study was conducted to investigate the relationships among sex, attribution, and selection of communication strategy in an instructional setting. The attributions and communication strategies selected by students following failing performances were examined. In addition, two sex variables were investigated--the sex of the subject and the sex of the teacher. An instrument using a projective constructive technique was prepared to present each subject with a situation in which a target person experienced failure in an educational setting. Subjects made attributions concerning the cause of the failure and wrote a brief story about how the target person felt and acted in response to the situation. The instrument was administered to 301 subjects who were students in various communication courses. Sixty percent were females; 40 percent were males. Approximately half of each group received situations with female teachers, half with males. Analysis identified seven basic strategies proposed by students in response to a failing grade. Males were more likely to identify "work harder" and "determine the cause," while females were more likely to cite "see the professor." No effect for sex of teacher on attribution of responsibility was revealed, and communication strategy was apparently not affected by attribution. (Appendixes include the instrument given to the subjects.) (DF)

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The Relationships among Sex, Attribution and Selection of a Communication Strategy by Students Following a Failure

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Abstract

Research in Attribution Theory has identified sex differences in the attributions made to explain outcomes of situations. Differential attributions may explain different communication choices made by individuals in response to situations. In the present study, the authors predicted sex differences in attributions and communication strategies made for an educational situation and a relationship between attribution and communication strategy. Three hundred subjects responded to a situation by responding to scales and writing stories. Scaled items were factor analyzed and stories were content analyzed to determine attributions and strategies. Analysis of Variance and Chi Square tests were conducted to test the hypotheses. Sex differences resulted in different attributions and communication strategies. Teachers can use the results to better understand and deal with student reactions to failure.

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The Relationships among Sex, Attribution and Selection of a Communication Strategy by Students Following a Failure

Attribution Theory is concerned with how individuals assign cause and responsibility for events surrounding them. Past research has focused primarily on the attribution of responsibility for success and failure. Subjects are traditionally presented with a situation and asked to identify whether the responsibility for the outcome lies with some aspect of the person experiencing the success or failure, or with some other cause. The two dimensions along which attributions are made are (1) the internal-external dimension (whether responsibility is perceived with the person or with some other cause), and (2) stability-instability (a function of how enduring the source of responsibility is). In most studies, subjects are asked to determine how much the outcome was influenced by the ability of the actor (a stable internal attribute), by effort of the actor (an unstable internal attribute), by task difficulty (a stable external attribute), and by luck (an unstable external attribute).

One of the major variables which has been investigated by attribution theorists is also of concern to many communication researchers, that is, sex (Deaux, 1976). Sex has been studied as an object variable, a subject variable, and as a defining characteristic of the task. Studies in the first two categories are of primary interest to the present investigation.

When sex is investigated as an object variable, subjects are provided with descriptions of males and females performing tasks successfully or unsuccessfully. Subjects are asked to make attributions for the success or failure. Success by males is generally attributed to ability, while success

by females is attributed more to luck or effort (Deaux & Emswiller, 1974; Etaugh & Brown, 1975). Conversely, failure by females is attributed to lack of ability, while failure by males is attributed to other causes (Feather & Simon, 1975).

Such attributions seem to stem from pervasive sex role stereotypes in our society. On the basis of extensive research, Broverman, Vogel, Clarkson and Rosenkrantz (1972) concluded that there is a strong consensus regarding differing characteristics of men and women in our society. Men are described as independent, competitive and objective; women are perceived as warm and expressive.

These stereotypes have been incorporated into the self concepts of men and women. As a result, sex has also been studied as a subject variable. In this second set of studies male and female subjects perform tasks and then attribute causes for their own performance. Again, the research suggests that males and females attribute differently. Females typically have lower expectations for success and are more likely to assume personal responsibility for failure than are males (Frieze, McHugh, Fisher & Valle, 1975). Females tend to attribute lack of ability for their failure more than they claim ability for their success, while males claim bad luck to be responsible for their failure and ability as the cause of their success (Nicholls, 1975; Deaux and Farris, 1977).

Although communication theorists have not investigated sex differences in attributions very extensively, a number of ideas from Attribution Theory have worked their way into communication research. Most notably, Berger and his colleagues have examined attribution in the process of uncertainty reduction, interpersonal attraction and relational development (e.g.,

Berger, 1973; Berger, 1975; Berger & Calabrese, 1975; Clatterbuck, 1979).

Attribution Theory may also be useful in examining the communication choices made by individuals. According to the theory, humans attempt to "make sense" of the world around them, often by perceiving causal relationships among phenomena. Given the theory's assumption that humans are miniature "social scientists" searching for "logical" explanations, one would expect that humans would behave in a manner consistent with their explanations. That is, the communication strategies selected in certain situations should be based on attributions made to explain those situations. For example, a father would respond differently to a child if he thought the child misbehaved intentionally rather than by accident. The parent bases his response on the perceived cause of the child's behavior; i.e., on his own attribution.

The instructional setting is ripe with assignations of cause and responsibility, and ensuing selections of communication strategies. Teachers may attempt to determine if students performed well because the test was too easy, the students were unusually bright or they studied very hard. The teachers then may base future instructional strategies on their attributions; they may make their exams more difficult, increase the challenge they offer their students or congratulate the students for working so hard. Of course, sex differences may also figure into teachers attributions. Teachers may attribute "skill" to the success of male students, but "hard work" or "luck" to the success of females. Of course, students also engage in attributions of cause and responsibility, and may base their communication strategies upon their attributions.

Given the importance of gender in communication and the potential of

Attribution Theory for explaining communication choices, the goal of the present study is to investigate the relationships among sex, attribution, and selection of communication strategy in instructional settings. Specifically, the attributions and communication strategies selected by students following failing performances are examined. In addition, two sex variables are investigated. The first is the sex of the subject (identical to the sex of the object or "failing" student); the second is the sex of the "source," the teacher who assigns the failure to the student. Given the preceding discussion, three research questions and three hypotheses are posed:

RQ1: What communication strategies do students select in response to a failing grade?

RQ2: Does the sex of the source influence the attribution of responsibility?

RQ3: Does the sex of the source influence the communication strategy?

H1: Males and females will make different attributions of responsibility in response to failure.

H2: Males and females will select different communication strategies.

H3: Communication strategy will be related to attribution of responsibility.

The first research question seeks to identify and categorize strategies students may use in response to a failing grade. The other two research questions concern the effects of the sex of the instructor who assigned the failure to the student. Although no available literature examines the effects of "source" sex on attribution, research investigating sex as an object variable justifies investigating a potential relationship.

The first hypothesis represents a replication of existing research on sex differences, but focuses on responses to failure. Most previous research has dealt with attributions resulting from success. The second hypothesis stems from the literature on sex differences and their expected effect on communication strategy, while the third tests the applicability of Attribution Theory to communication choice.

Methods and Procedures

The Instrument

The instrument (Appendix A) employed a projective constructive technique which presented each subject with a situation in which a target person experienced failure in an educational setting. Subjects made attributions concerning the cause of the failure, and wrote a brief story about the how the target person felt and acted in response to the situation. The situation was

> Anne (John) is taking a course in her (his) major taught by Steve (Susan) Johnson. When midterm grades are announced, Anne (John) discovers that she (he) is failing the course.

The stimuli were written so that subjects would identify with the student in the situation. Males were presented with situations involving male students while females received situations about female students. This made the sex of the subject the same as the sex of the target person, while the sex of the source was the sex of the teacher. Research on projective techniques, such as the Thematic Apperception Test, shows that in creating a story, the wishes, strivings and conflicts of the imaginary person may reflect those of the storyteller.

Subjects and Administration

The instrument was administered to 301 subjects who were students in various communication courses. Sixty percent were females; 40% males. Approximately half of each group received situations with female teachers, half with males.

Group rather than individual administration was used on the basis of previous research that indicates that the quality and thematic content of stories written in groups are identical to those obtained orally (Eron & Ritter, 1951).

Attribution

Fourteen Likert type scales concerning attribution were factor analyzed using principal factor analysis with iterations and varimax rotation. Four easily labeled factors were produced, all with factor loadings over .50 and accounting for 60% of the total variance. Factor 1, Teacher/Grading Error, had factor loadings ranging from .72 to .78 and accounted for 49% of the explained variance.

Factor 2, Uncontrollable Factors, had factor loadings from .51 to .80 and accounted for 20% of the explained variance. Factor 3, Student Error, had factor loadings from .61 to .81 and accounted for 16% of the explained variance. Factor 4, Fate, had factor loadings of .83 and .84, and accounted for 14% of the explained variance.

Attribution scales were created by summing the items which loaded on each factor (See Appendix B for a summary of items and scales). The Teacher/Grading Error Scale consisted of four items, had a mean interitem correlation of .51 and internal reliability of .80. The Uncontrollable Factors Scale consisted of five items, had a mean interitem correlation of

.40 and internal reliability of .78. The Student Error Scale consisted of three items, had a mean interitem correlation of .34 and internal reliability of .60. The Fate Scale had two items, an interitem correlation of .40 and internal reliability of .56.

Two sets of scales correlated greater than .20. The Pearson R between the Teacher/Grading Error Scale and the Student Error Scale was .25; between the Teacher/Grading Error Scale and the Uncontrollable Factors Scale, .53.

Communication Strategy

Stories written by subjects were content analyzed according to the action taken by the student in response to the failing grade. Ten percent of the stories were recoded, providing reliability of 87 percent agreement between first and second codings.

Data Analysis

H1 and RQ3 were analyzed together using two way analysis of variance for each of the four Attribution Scales. H3 and RQ2 were analyzed by dichotomizing the Attribution Scales and performing Chi Square analyses. Chi Square tests were also used to test the second hypothesis. Criterion alpha was preset at .05.

Results

Content analysis identified seven basic strategies proposed by students in reponse to a failing grade. Those strategies were See the Professor, Work Harder, Study Better, Analyze the Situation, Drop the Course, Confront the Problem Directly and Escape the Situation. The most commonly selected strategy was to See the Professor, with 44.7% of all subjects stating it. Study Better was proposed by 13.7%, while 12.6% suggested Work Harder. Analyze the Situation was the solution for 4.6%; Drop the Course was

proposed by 4.2%. The other two categories were created by collapsing a variety of communication strategies into them. Confront the Situation, with 11.5%, included suggestions such as "get motivated," "remedy the situation," "do extra credit work," and "take action against the professor." Escape the Situation, with 8.8%, consisted of proposals such as "hope," "do nothing," and "get married and quit school."

No effect for sex of teacher on attribution of responsibilty was revealed by the two-way analysis of variance used to test Research Question 2. Similarly, Research Question 3 was not supported ($\chi^2 = 4.1$, df = 6, $p > .05$). Sex of the source of failure did not influence communication strategy.

The two way analysis of variance revealed a significant effect for Hypothesis 1 on two of the four attribution scales. On the Teacher/Grading Error Scale, males scored lower than females ($p < .05$). On the Uncontrollable Factors Scale, males also scored lower than females ($p < .05$). Males were less likely to assign responsibility for the failure to teaching/grading error or to external factors than were females.

Hypothesis 2 was also supported ($\chi^2 = 14.9$, df = 6, $p < .05$.) Males and females selected different communication strategies in response to failure. Inspection of the data revealed that males were more likely to Work Harder, Determine the Cause, and Confront the Problem Directly, while females were more likely to See the Professor. The two groups were equally likely to Study Better, Drop the Course and Escape the Situation.

Hypothesis 3 was not supported by the Chi Square analyses (χ^2 values ranged from 1.25 to 3.87, df = 6, $p > .05$). Communication strategy was not affected by attribution.

Discussion

Literature in Attribution Theory reports that males and females make different attributions concerning the outcomes of events. In successful situations, males make internal attributions while females make external attributions. Although less research exists on failure, existing studies have found that males attribute failure externally while females attribute internally.

The results of the first hypothesis found that males and females made different attributions, but not in the directions indicated by the theory. Although the effects were small, males were less likely to blame failure on teaching/grading error and uncontrollable factors. Perhaps males are more likely to make internal attributions regardless of the outcome (Could it be that men's attributions are less self-serving than initially suggested?).

As predicted, males and females selected different communication strategies although the differences may be due to factors other than attributions. The different strategies seem to reflect greater action by males and more passivity by females. However, perhaps males and females were equally likely to act, but males chose to act alone while females chose to interact with others. That is, the female tendency to turn to the professor reflects social interest rather than passivity.

Contrary to expectation, no relationship was found between attribution and communication strategy. Dichotomizing the attribution scales may have resulted in too much information loss to reveal differences, or subjects may have created a more specific frame of reference in writing the stories than in responding to the scales.

Based on the results of this investigation, sex of the source does not

seem to influence attribution or communication strategy. Subjects were not more likely to blame male or female teachers for their failure, nor did they select communication strategies based on the sex of the source.

Teachers can use the results of this investigation in several ways. The first is to be aware of the importance of attributions and the sex differences associated with them. Males appear to accept personal responsibility for outcomes, both positive and negative, more than females. Teachers must also be sensitive to the communication strategies and associated sex differences selected by students who are failing. Although "See the Professor" was the most commonly selected strategy in this study, over half of all subjects proposed other strategies. It seems that those who most need the involvement of their professors may not always solicit it. Of course, these numbers may not equate with actual behaviors, but they do reveal potential problems for failing students.

Future research should focus on different communication strategies selected by students in various situations and attempt to identify the underlying factors which influence those strategies. Attribution Theory provides one set of explanations and should be investigated further.

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Appendix A

I. Please provide the following information:
   A. Sex (circle one): Male Female
   B. Date of Birth:
   C. Year in School: Fr So Jr Sr
   D. Grade Point Average:
   E. Social Security Number:
   F. Major:

II. This study is designed to study pertinant dimensions of the educational process. Below you are given a brief description of a situation. Read the situation and turn to the next page. Fully complete that section before moving to the next step.

III. Anne (John) is taking a course in her (his) major area taught by Steve (Susan) Johnson. When midterm grades are announced, Susan (John) discovers that she (he) is failing.

IV. People assign responsibility for the outcomes of situations to many different causes. Identify how responsible each of the following causes is for the failing grade. Please use the following scale when evaluating the causes:
   1 = Not an important factor
   2 = A slightly important factor
   3 = A moderately important factor
   4 = A very important factor
   5 = An extremely important factor

   a. Bad luck
   b. Lack of effort by the student
   c. Difficulty of the test
   d. Unfairness in grading
   e. Incompetence of the student
   f. Incompetence of the teacher
   g. Lack of motivation by the student
   h. Error in grading
   i. Lack of experience by the teacher
   j. Fate
   k. Personal problems of the student
   l. Student overworked
   m. Student had lack of test-taking ability
   n. Student had fear of tests

IV. Please write a short story about the situation. Your story should include:
   a. Who is responsible for the story and why;
   b. The student's feelings about the situation; and
   c. What, if anything, the student does about it.

Appendix B

Attribution Scales

Teacher/Grading Error Scale:

Unfairness in grading
Incompetence of the Teacher
Error in grading
Lack of experience by the teacher

Uncontrollable Factors Scale:

Difficulty of the test
Personal problems of the student
Student overworked
Student had lack of test-taking ability
Student had fear of tests

Student Error Scale:

Lack of effort by the student
Incompetence of the student
Lack of motivation by the student

Fate Scale:

Bad luck
Fate